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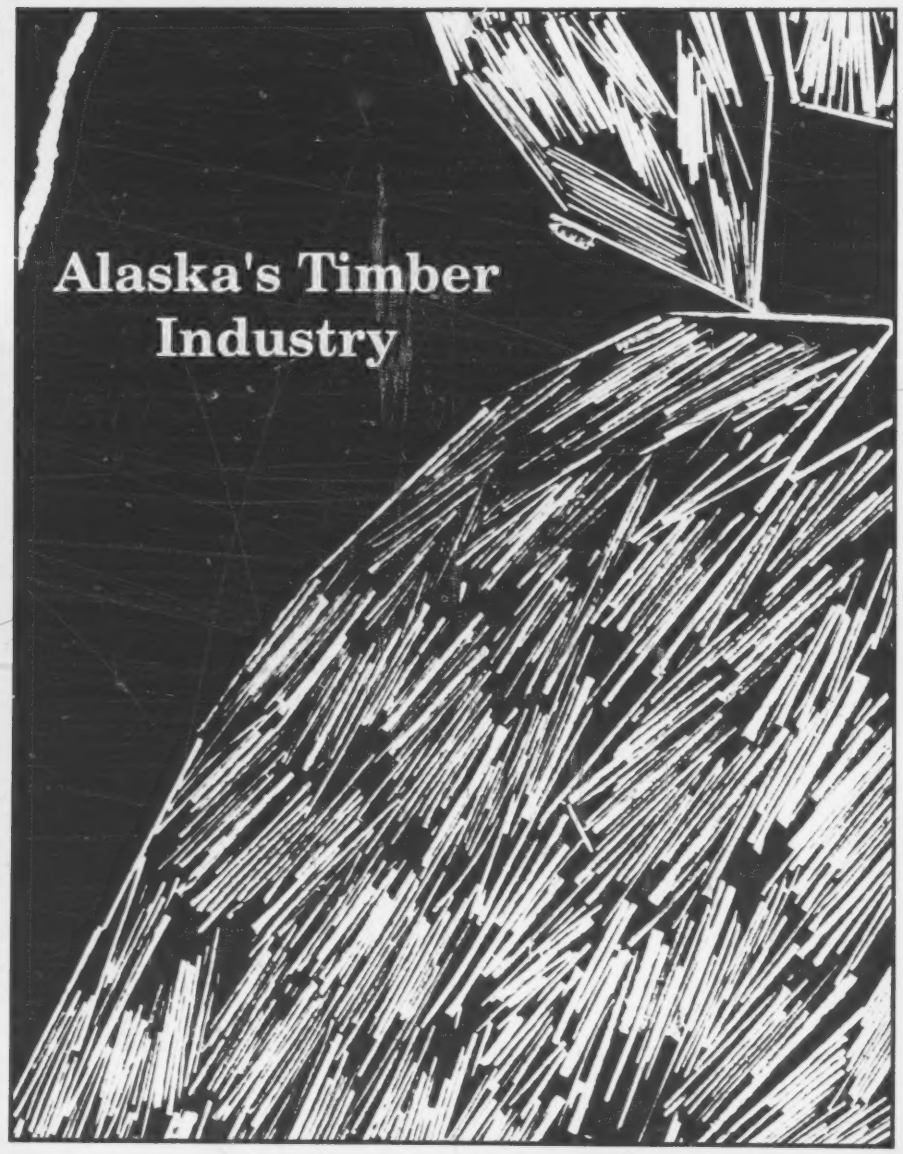
# ALASKA ECONOMIC TRENDS



## Alaska's Timber Industry

October 1988

**A $20 Billion Economy-Alaska's Gross State Product**

**Alaska's Employment Scene-Have We Hit Bottom Yet?**

# Alaska Economic Trends

***Steve Cowper*, Governor, State of Alaska**

***Jim Sampson*, Commissioner Department of Labor**

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**October 1988**
**Volume 8**
**Issue 10**

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**The following notes pertain to Nonagricultural Wage and Salary Employment Tables:**

Government includes teachers in primary and secondary schools, and personnel employed by the University of Alaska.

Benchmark date March 1987.

P/ Denotes preliminary estimates

Alaska Economic Trends is published monthly by the Alaska Department of Labor, Research and Analysis Section, P.O. Box 25501, Juneau, Alaska 99802-5501.

POSTMASTER: Send address change to ALASKA ECONOMIC TRENDS, P.O. BOX 25501, Juneau, Alaska 99802-5501.

Alaska Economic Trends **is a monthly publication dealing with economic information analysis and issues of Alaska. Opinions expressed by guest authors may not be consistent with those of the Alaska Department of Labor.**

**We welcome contributions on current economic issues from our readers. For a copy of our editorial policy contact John Boucher, Editor, Alaska Economic Trends, Alaska Department of Labor, P.O. Box 25501, Juneau,**

# Alaska's Timber Industry

By Brian N. Rae

There isn't much good news for Alaska's timber industry. There hasn't been for years. Most of the programs seen as subsidizing the industry today were created to make up for past blows to the industry. There have always been other places that could produce more product less expensively. Aside from a small percentage of very high quality timber, Alaskan timber is not significantly different from that of other areas. A high percentage of Alaskan timber is sold on the world market, particularly to Japan. Shifts in currency exchange rates impact most domestic producers. Alaskan producers live or die by exchange rates.

Still Alaska's timber industry survives. Several factors account for its continued existence. Some are alluded to above and others, through public debates on their merits, are common knowledge to most Alaskans. The industry has seen tremendous change over the past several years. The cumulative impact of all factors dictate the health of the industry, and continuing changes in these factors will affect the industry.

**Employment in the timber industry fell sharply from a high in 1980 through 1985, losing one-third of its employment**

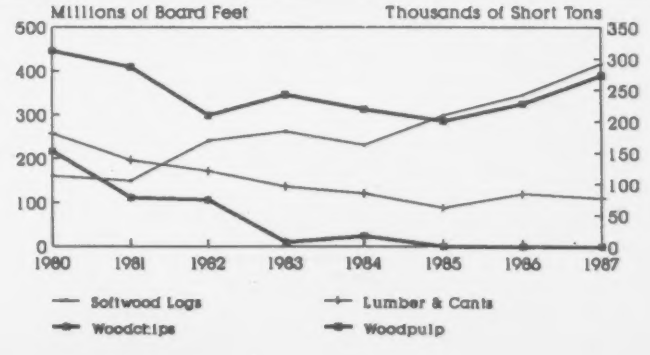
### Market Forces in the Alaskan Timber Industry

Alaskan timber has a weak position in the world market. While some products are unique and in high demand, most Alaskan timber can be easily replaced by products from other areas. Alaskan producers are last in first out suppliers. This means that when the market is strong and other factors are favorable for Alaskan producers, their product can compete with that of other areas. As the market weakens or production costs increase, Alaskan producers are the first driven out of the market.

Alaska's timber industry must contend with the fluctuations of the world markets. Changes in relative prices among different countries' timber have large impacts on sales. The concept of relative price changes is important. If the price of Canadian timber drops while Alaska's stays the same, then the Alaska product's price has increased relative to the Canadian product. Currency movements are the major cause of relative price changes. Movements between a supplier's and a consumer's currency will affect sales, but currency movements among suppliers often have as much, if not more, effect.

For example, devaluation of the yen hurts the entire industry, since foreign products become more expensive for Japanese consumers. By itself, devaluation of the yen would cause a drop in the Japanese demand for timber. There are, however, few substitutes for wood in Japan, the main consumer of Alaskan timber. The tight grained, old growth spruce is used for

**Figure 1**
**Forest Product Exports from Alaska by Product Type-Calendar Years 1980-1987**




Source: U.S. Forest Service
Logs, Lumber & Cants in Board Feet
Woodchips and Woodpulp in Short Tons

everything from fine furniture to exposed ceiling beams. It is approaching luxury item status, not solely a construction material but a sign of affluence and a thing of beauty.

For these reasons, demand for prime, old growth timber should not drop sharply. Demand could drop sharply for **Alaskan** old growth timber if the Canadian dollar devalues in relation to the U.S. dollar. The Canadian product would become relatively less expensive to Japanese consumers, hindering the export of Alaskan timber.

Several other factors can affect the price of Canadian timber in comparison to Alaskan timber. In the early 1980s, with depressed market conditions lowering demand, stumpage fees (the price paid for standing timber) for Canadian producers were lowered. The U.S. government, pressured by U.S. producers claiming unfair competition, threatened to restrict imports of Canadian lumber during the mid 1980s. In 1986, the Canadian government imposed an export tax on lumber shipped to the U.S., raising costs for Canadian producers doing business with the U.S.

Under these conditions, more lumber from British Columbia was available for export to other countries, competing directly with Alaskan products. The U.S. is the main consumer of Canadian lumber; only a small percentage is exported to Japan. However, the Canadian timber industry dwarfs the Alaskan industry in output. Much of the Canadian product exported directly competes with Alaskan products. A small change in Canadian exports could represent a large change in Alaska's share of premium wood products in the world market.

In December, 1987 the Canadian tax on exports was removed and replaced with increased stumpage fees. This could have two positive effects on Alaska's timber industry. When the export tax was in place, the cost of selling Canadian timber to U.S. firms was more expensive than selling to other foreign firms. Without the export tax, the U.S. is a more attractive trading partner. More Canadian timber should be sold in the U.S. This will remove a portion of the Canadian lumber competing with Alaskan lumber on the world market. Consumption of Canadian lumber might increase in the U.S. if this leads to a price decrease.

The increased stumpage fees also increased production costs for all Canadian timber products, including those destined for locations outside the U.S. All other things being equal, this decreases the relative price for Alaskan timber and strengthens its position in the world market.

To compensate Canadian firms for increased stumpage fees, lower shipping rates for timber products might be implemented on the government owned railroad. A potential savings to Alaskan producers could be realized by shipping products to Prince Rupert or Vancouver, with transport by the Canadian railroad to markets in the lower 48. While rail transport will be less expensive than before, additional savings will come from a firm's ability to use foreign hulled vessels, since provisions of the Jones Act will not apply. 1/

Besides the cost of buying the timber and shipping it to market, other

**Table 1**
**Tongass National Forest Receipts and Payments to State (in thousands)**
**FFY 80 through FFY 87**

| Federal Fiscal Year | Receipts | Payments |
|---|---|---|
| 1980 | $26,024 | $6,506 |
| 1981 | 15,008 | 3,752 |
| 1982 | 21,623 | 5,406 |
| 1983 | 5,366 | 1,341 |
| 1984 | 4,063 | 1,016 |
| 1985 | 209 | 52 |
| 1986 | 1,967 | 492 |
| 1987 | (2,034)[1] | |

[1] Negative receipts were reported in 1987 because of retroactive stumpage fee reductions on lease agreements.

Source: U.S. Department of Agriculture, Forest Service, Alaska Region. Timber Supply and Demand 1987. Alaska National Interest Conservation Act Section 706(a) Report Number 7. May 1988.

production costs could affect the price of Canadian timber in relation to Alaskan timber. A recent labor settlement in British Columbia could help Alaska's position in the world market. Canadian mill workers recently received, on average, a 16% increase in wages. Alaskan workers several years ago accepted wage reductions to make Alaskan timber more competitive and to protect their jobs. Comparisons of labor costs are difficult. Changes in currency and worker productivity rates can obscure changes in the real cost of labor. Studies conducted in Canada showed that their timber industry employment decreased at a more rapid rate between 1980 and

**Table 2**
**Volume prepared, offered, sold and harvested in Tongass National Forest**
**Short term sales program, FFY 1980-1989 (Net sawlog volume)**

| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| New volume prepared | 194 | 148 | 86 | 73 | 195 | 125 | 172 | 54 | 84 | 100 | 1,231 |
| Volume redesigned | 0 | 0 | 0 | 12 | 0 | 85 | 110 | 52 | 0 | 5 | 264 |
| Volume offered-new | 176 | 151 | 115 | 184 | 178 | 136 | 84 | 98 | 84 | 100 | 1,306 |
| Volume sold | 173 | 144 | 75 | 69 | 45 | 36 | 174 | 150 | 84 | 105 | 1,055 |
| Volume lost | 0 | 0 | 4 | 37 | 5 | 70 | 12 | 48 | 0 | 0 | 176 |
| Volume reoffered & sold | 0 | 15 | 9 | 2 | 14 | 0 | 90 | 52 | 0 | 0 | 182 |
| Volume ready to sell | 100 | 104 | 111 | 78 | 223 | 242 | 228 | 84 | 84 | 79 | 1,333 |
| Volume harvested | 114 | 125 | 132 | 46 | 50 | 32 | 50 | 63 | 125 | 120 | 857 |
| Volume uncut under contract | — | — | — | — | — | — | — | 438 | 397 | 382 | — |

Source: U.S. Department of Agriculture, Forest Service, Alaska Region
Timber Supply and Demand 1987. Alaska National Interest Conservation Act
Section 706(a) Report Number 7. May 1988.

**Table 3**
**Forest Product Exports from Alaska to All Destinations**
**1980-1987 Calendar Year 1980-87[1]**

| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | (e) 1987 |
|---|---|---|---|---|---|---|---|---|
| Softwood Logs | | | | | | | | |
| Volume (MMBF) | 161 | 149 | 241 | 262 | 232 | 299 | 346 | 417 |
| Value ($1,000) | 85,489 | 71,690 | 115,333 | 111,587 | 91,844 | 115,820 | 137,580 | 179,190 |
| Unit Value $/MBF | 533 | 481 | 478 | 426 | 397 | 387 | 398 | 429 |
| Lumber and Cants | | | | | | | | |
| Volume (MMBF) | 257 | 196 | 172 | 137 | 121 | 88 | 120 | 111 |
| Value ($1,000) | 89,372 | 59,733 | 56,692 | 41,000 | 34,336 | 23,083 | 32,083 | 30,264 |
| Unit Value $/MBF | 348 | 305 | 330 | 300 | 284 | 263 | 267 | 273 |
| Woodchips | | | | | | | | |
| Volume (MSTN) | 151 | 78 | 74 | 7 | 17 | 0.0 | 0.0 | 0.0 |
| Value ($1,000) | 11,436 | 5,716 | 5,116 | 230 | 767 | 0 | 0 | 0 |
| Unit Value $/STN | 76 | 74 | 69 | 35 | 47 | 0.00 | 0.00 | 0.00 |
| Woodpulp | | | | | | | | |
| Volume (MSTN) | 312 | 286 | 209 | 242 | 219 | 200 | 228 | 274 |
| Value ($1,000) | 153,247 | 140,494 | 97,089 | 117,783 | 97,345 | 74,153 | 89,167 | 128,239 |
| Unit Value $/STN | 491 | 491 | 464 | 487 | 445 | 370 | 392 | 469 |
| TOTAL VALUE ($1,000) | 339,544 | 277,715 | 275,271 | 270,600 | 214,339 | 213,057 | 258,830 | 337,693 |

[1] Volumes exported are in millions of board feet (MMBF) of thousands of short tons (MSTN). Values are free along ship (FAS) in thousands of nominal dollars. Unit values are dollars per unit.

(e): estimate

Source: U.S. Department of Agriculture, Forest Service, Alaska Region from data provided by the U.S. Department of Commerce 1987.

**In 1987 Japan purchased 65% of the export logs and 98% of Alaskan lumber**

1985 than did production. Similar results could be expected in Alaska, however care must be taken with these types of comparisons since the product mix is different over these years. In 1987, round logs were a higher percentage of exported timber, and are the least labor intensive product (Figure 1 and Table 3). All other things being equal, wage increases in competing countries help Alaska's position in the world market.

In addition to changes in production costs, an international agreement might affect timber sales. In 1987 Japan purchased 65% of the export logs and 98% of Alaskan lumber. Japan has always been a major importer of Alaskan timber products, but Japan also imports from the Soviet Union, New Zealand, the Pacific Northwest and British Columbia. With Japan's emergence as a world economic power, and their growing balance of trade surplus with the U.S., pressures are mounting for Japan to import more U.S. products. Much of the international trading in Japan is overseen by huge trading companies. These companies are aware of these pressures, and will sustain a loss in one subsidiary company to assure free trade for its other products.

In the not too distant past, Japan had an advantage over the U.S. in labor costs. Japan preferred to purchase round logs when available, performing any processing work in their country. With rising wages, Japan no longer enjoys an advantage in labor costs, and is purchasing more lumber and finished products. Unfortunately, many lesser developed countries are in a better position to take advantage of this change than Alaska. Alaskan round log exports have, except for a slight drop in 1984, been increasing since 1980. This is mainly due to an increased supply, as demand was down during most of this period. Alaska Native and Village corporations have recently started logging operations, and do not have to perform the primary manufacturing which is required of timber from Forest Service land.

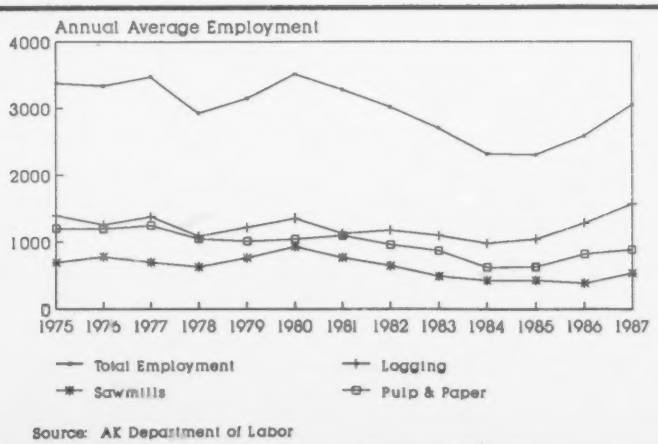
When Southeast Alaska employment was forecast for 1988 and 1989 (April 1988 *Alaska Economic Trends*) it was assumed the U.S. dollar would not revaluate in comparison to the yen enough to affect timber industry employment. This should hold true unless other factors such as those outlined above contribute to affect the relative price of Alaskan timber to the Japanese.

### The Timber Industry and Employment

Some have argued that Alaska's economy, through hard knocks and diversification, is maturing. Still, our economy relies heavily on its natural resources to provide the foundation upon which other sectors can build. This state has always had a resource based economy. Even before its purchase by the United States, Alaska was used as a reservoir of raw materials. Since timber is one of Alaska's most abundant natural resources, the harvesting and processing of Alaska's timber has provided an important source of employment for Alaska's economy for many years.

Employment in the timber industry fell sharply from a high in 1980 through 1985, losing one-third of its employment (Figure 2). The industry

**Figure 2**
**Timber Industry Employment**
**Calender Year 1975-1987**




Source: AK Department of Labor

fell victim to dwindling demand in the early and mid 1980s, although some factors such as logging of Native lands slowed industry employment losses.

During the good market years of 1986 and 1987, the timber industry posted double digit percentage employment gains. This is strong growth under any circumstances, but especially so considering the poor performance of the economy as a whole. In 1986, seafood processing was the only other industry to register any employment gains. Outside of the manufacturing sector, no other major industry grouping posted employment gains during 1986 or 1987. Without the strength of the manufacturing industry, the state's most recent recession would have been even worse.

While hard to quantify, indirect employment from the timber industry is clearly evident. Certain sectors, such as the Southeast water and air transportation industries, do a substantial share of their business with the timber industry. Federal employment related to the timber industry in Alaska is also important to the economy. Of 18,000 federal employees, 1,000 work for the Forest Service although not all of these workers are hired because of timber activities. Most Southeast Alaskan communities with logging activities benefit from this federal employment. Many of the employees are residents of these communities, and some residents obtain part-time or seasonal employment with the Forest Service. The Forest Service, using an input-output simulation model, estimates that for every three jobs in the timber industry, an additional job is created in Alaska. Others have estimated the ratio higher for the economy as a whole, with three jobs created for each five jobs in an industry.

Like most segments of the economy, the amount of money injected into the economy by the timber industry is small when compared to the oil industry. Total yearly payroll for logging, sawmills and the pulp mills in 1987 was $108,385,968 or one-fifth that of oil and gas mining, representing 1.9% of the state's total nonagricultural payroll. The average employee's annual pay in 1987 was almost $35,500, nearly 30% higher than the all-industry average.

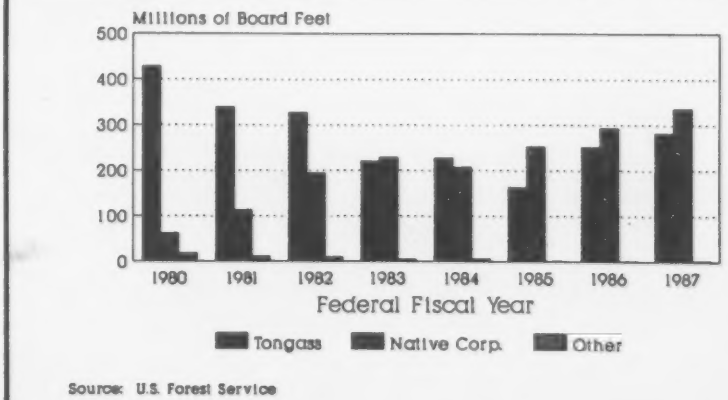
The industry is very important to the state's economic health. Timber products accounted for 20% of the dollar value of all Alaskan exports in 1986. During 1985, employment in the timber industry was 1% of total employment; in 1987 it was 1.4%, due to increasing timber employment and decreasing total employment. Much of this employment is in smaller communities, predominantly in Southeast. Many of these communities rely solely on the timber industry to fuel their economy. Terms of the timber sales in both the Tongass and Chugach forests give the state 25% of all monies received by the federal government for timber sales (Table 1). This money is mainly used to finance schools and build public roads in areas near the forests.

**Timber products accounted for 20% of the dollar value of all Alaskan exports in 1986**

### The Tongass Timber Reform

The single most important factor for the long term future of Alaska's timber industry is the outcome of the Tongass timber reform debate. Under provisions of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA),

**Figure 3**
**Timber Harvest in Southeast Alaska by Source of Timber-Federal Fiscal Years 1980-1987**




Source: U.S. Forest Service

**To help insure employment in the Tongass area, ANILCA required the Forest Service to make available 4.5 billion board feet of timber per decade for harvest, or 450 million board feet per year**

the United States Forest Service stated its intention to fund certain timber harvest activities, while at the same time removing large areas of land from future timber harvests.

To help insure employment in the Tongass area, ANILCA required the Forest Service to make available 4.5 billion board feet of timber per decade for harvest, or 450 million board feet (MMBF) per year. The Forest Service realized that to maintain a viable timber industry certain steps would have to be taken. Because the available timber was of lower quality and less accessible, the Tongass Timber Supply fund was created to build roads, implement measures to improve growth rates and quality, and promote advanced logging techniques.

The federal government had taken earlier measures to promote the timber industry in Southeast Alaska. In the 1950s, long term timber contracts were signed with several companies. Two of these contracts are still in force. Ketchikan Pulp Company and Alaska Lumber and Pulp Company were guaranteed access to 13.3 billion board feet of timber over the course of their 50 year contracts.

Smaller sales of Tongass timber continue. During the 1987 federal fiscal year, the U.S. Forest Service offered about 400 MMBF of timber for sale. Approximately one-quarter of this amount was offered to small purchasers (Table 2). Of the total offering', 150 MMBF was purchased, which included 52 MMBF from landspreviously offered for sale. the cost of infrastructure development necessary to prepare timber tracts for sale are significant. With such a small percentage of available timber actually being purchased, the U.S. Forest Service is spending more than it collects from sales.

This is not unexpected, considering the poor market of the early 1980's. The neighboring British Columbian government, with a long history of profitable forest management, also lost money during this period. The losses were increased with the Forest Service's interpretation that it must prepare and supply 450 MMBF each year, and with the required infrastructure development necessary after ANILCA.

Between three and seven years are needed to prepare a site for harvest according to the Forest Service. Recently, the U.S. Office of Management and Budget and the Forest Service have taken the position that only the amount demanded need be prepared for harvest. This seems to be a reasonable approach, if a buffer is maintained to satisfy unforeseen demands for timber.

Provisions were placed on the sale of Tongass timber to increase employment in Southeast Alaska. Before the timber could be exported primary processing would have to occur. At a minimum a log would have to be surface cut on two sides, creating a cant. The state also required primary processing on state forest land's timber until a court decision in 1982 abolished this provision. The intention of these provisions was to promote more extensive processing, but this reduced the demand for the product. Producers are, at present, performing the minimum amount of processing necessary to meet the Tongass requirements.

### Alaska Native Regional and Village Corporations

The Native regional and village corporations are big players in Alaska's timber industry. Within Southeast Alaska alone, over 600,000 acres are Native owned. Other areas of the state showing strong timber potential are the Prince William Sound area, the Kenai Peninsula and the Mat-Su boroughs, all with large Native land holdings. Each Alaska Native village corporation has approximately 23,000 acres of land. Sealaska, the Southeast regional corporation, has over 300,000 acres of land and is negotiating the conveyance of nearly 30,000 remaining acres. To date, about 20,000 acres of Sealaska timberland have been harvested with direct employment of nearly 400 persons.

In comparison to the sustainable yield approach taken by the U.S. Forest Service, Native corporations have been very aggressive in their timber harvest plans. This approach has drawn criticism from different sectors, who correctly point out that at present harvest rates marketable timber supplies will be depleted by the early 1990s.

Before criticizing the current harvest plan, one should consider the position in which the Native corporations found themselves. As part of the Alaska Native Claims Settlement Act (ANCSA), the corporations were conveyed certain properties. In Southeast, much of these properties were tracts with marketable timber, seen as capital. An agreement could just as easily have been reached with cash, which was needed to diversify the corporations and make them profitable. Accepting timberland allowed the corporations to sell the timber for cash flow and retain the land.

Many persons would like to see the corporations use the sustained yield approach to harvests. Unfortunately, this is unfeasible for several reasons. The small size of the land holdings of an individual corporation, 23,000 acres for the village corporations, precludes this approach. Using information obtained from Sealaska Corporation, between 55% and 60% of the land conveyed to Sealaska under ANCSA contains marketable timber. If this same proportion holds true for village corporations, the annual allowable sustained yield harvest would be less than 160 acres. After investing the fixed costs for construction of a base camp, log transfer facilities, roads and other infrastructure, harvesting such a small tract would lose the corporation money.

Secondly, much of the lands held by the corporations is fragmented, leaving tracts too small to profitably harvest. If a large operation is active close to a small tract, with infrastructure costs already absorbed by the large operation, then the tract might be harvested. Agreements might also be worked out where timber surrounding the small tract is traded for other land holdings of the village corporation.

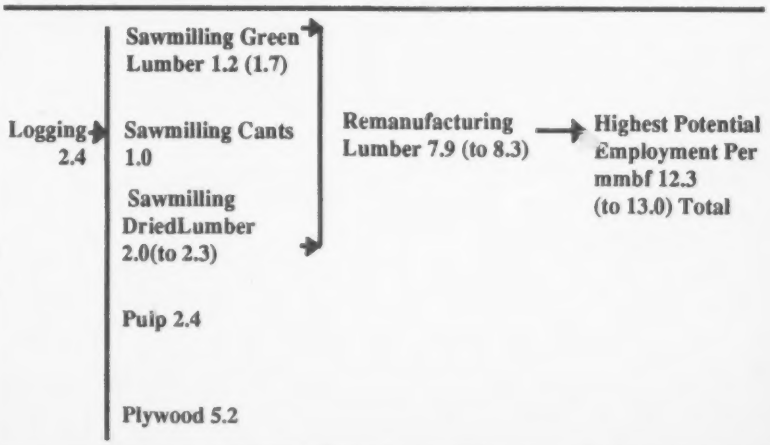
Because of the high start-up costs involved in creating a timber company and the uncertainty of the world market, many corporations contract out their timber harvests. One which took the risk to start its own company was the Klukwan village corporation. In 1981 the corporation created an operating subsidiary for logging and road construction, Klukwan Forest Products.

In the beginning the company performed contract logging, but has recently begun purchasing timber from other corporations. Some of these purchases include 40 to 50 MMBF from the Kootznoowoo corporation in 1985 and from Cape Fox in 1986. In the summer of this year, the company purchased 200 MMBF on the Kenai peninsula from the Nanilchik corporation. The company has not only been turning a profit, but has created a large number of jobs and injected money into local economies. Including employment in stevedoring, Klukwan has over 400 employees with an annual payroll in excess of $10 million.

Bob Loiselle, president and CEO of Klukwan Forest Products, points out

**Although total employment fell during the early 1980s, the fall would have been worse were it not for the increased logging of Native lands**

**Figure 4**
**Employment by the Board Foot**
**Employment Pattern Per Million Board Feet (mmbf)**


Logging 2.4
Sawmilling Green Lumber 1.2 (1.7)
Sawmilling Cants 1.0
Sawmilling DriedLumber 2.0(to 2.3)
Pulp 2.4
Plywood 5.2
Remanufacturing Lumber 7.9 (to 8.3)
Highest Potential Employment Per mmbf 12.3 (to 13.0) Total

that harvesting of Native timber has had a positive and stabilizing effect on Southeast Alaska's economy. During the early 1980s, demand for timber was falling sharply. Employment was declining as companies were forced to reduce or curtail operations. At the same time, the Native lands became open to harvest, employing many who might have otherwise been laid off. Although total employment fell during the early 1980s, the fall would have been worse were it not for the increased logging of Native lands (Figure 3).

The need for cash was a strong incentive to harvest Native lands. The corporations could have made higher profits if they had been able to wait for better market conditions, but this was impossible. In the long run, the decision to harvest worked out well for the corporations. When conveyed to the corporations, the timber was appraised. For accounting purposes, this appraisal became the value of the resource. Since the corporations are able to sell net operating losses (NOLs) to other companies for tax purposes, large "paper" losses were realized. The sales of NOLs helped the corporations' cash flow and supplied the capital necessary to diversify operations.

**Alaska is a small supplier on the Pacific Rim market, supplying only five percent of the total timber consumed**

Many contend that round log exports from Native lands directly compete with Tongass cants, which have the minimum primary processing required of timber from the National Forest. The two products do compete, but the degree is difficult to measure. With decreased demand during the early 1980s, sales of Tongass timber fell sharply. At the same time, exports of Native round logs were rising. This **alone** does not prove that round logs supplanted cants in the market.

In a depressed international market, sales of Tongass cants would be expected to decline. Those firms working in the Tongass are profit driven. They have to acquire standing timber and be able to sell it for a profit. If the demand for this timber falls, so will the price. Companies are forced to reduce their operations.

The Native corporations, as mentioned above, found themselves in a different situation. At the start of a declining market, they were given access to millions of board feet of timber as part of the ANCSA settlement. The Native corporations had already acquired this timber through the settlement. As long as harvest costs were less than the market prices, harvesting brought in cash needed for diversification. Much Native land was harvested as quickly as possible to generate this cash.

Alaska is a small supplier on the Pacific Rim market, supplying only five percent of the total timber consumed. If all timber competes evenly, if there is no uniqueness among timber from different countries, then the increased supply of Native round logs had very little impact on the demand for cants. Some argue that the harvest of logs from Native lands helped the industry in two ways. First, these sales maintained Alaskan timber's place in the world market. Second, many smaller companies which might have closed during the weak market period were able to survive.

Under a different set of assumptions, the competition between cants and round logs is much greater. If Alaskan timber is unique, with very little competition from timber from other countries, then cants and round logs directly compete. Cants are seen as an inferior product by many buyers, who prefer round logs. With the lower demand of the early 1980s and the higher supply of round logs, round logs had a large competitive advantage.

The degree of displacement of cants by round logs is somewhere between these two extremes.

### Changes in the Industry

Several changes have taken place within the industry over the last several years. One of the most important is the entry of larger companies. Several smaller operators in Alaska's timber industry were forced to close when demand declined. Larger companies are better able to maintain operations

during these periods, and should provide additional stability to the industry. These larger companies are also able to invest in larger projects with the potential for long run gains. Some of this increased investment, however, will be for new technologies which could reduce the number of jobs per unit of output.

Some of these employment declines could be countered. Devaluation of the U.S. dollar also makes value added processing more feasible. Most producers have found a stronger market for and higher profit margins with minimally processed timber. If additional processing occurs in state, the number of jobs per unit of timber increases. Either more jobs could be created in the timber industry, resource depletion will occur at a slower rate, or some combination of the two would result. Figure 4, prepared by the U.S. Forest Service, shows the amount of additional employment which could be realized through value added processing. Presently most operations end with logging and sawmilling cants.

Alaska holds an increasing share of premium quality timber. Few marketable stands of fine grained timber remain in the lower 48. Some believe that products of lesser quality will become more sought after, such as fine grained hemlock. The opportunity arises for more value added processing, and more jobs, as supplies of these products diminish in other areas. Demand for high quality timber is quite high, and consumers would accept a more finished product than has been offered in the past. The Canadian government is moving in this direction, attempting to regain jobs lost to new technologies.

Much of this premium quality timber remains in the Tongass. Most agree that marketable timber from Native lands will be harvested by the middle 1990s. The Forest Service predicts that exports of logs will decrease by 40% within five years. At that time, without continued support for the Tongass timber industry, large employment losses will occur. The amount of support might not have to be as great as in the past. The product in the Tongass is valuable, and is becoming more so with time. Over time and with adequate management, investment in the Tongass will pay off.

Other sources of Alaskan timber products may become feasible in the near future. Although little progress has been made to date, interest is still high for operating a plywood manufacturing facility in the Mat-Su region. Two companies expressed a desire to locate in the area, but have not yet reach agreement with the state on long term timber sales.

An additional timber resource has recently been used for commercial purposes near Fairbanks. A processing plant was opened last year with a rather unique product line. One area resident referred to the endeavor as the "toothpicks, match sticks and chopsticks" plant. The company uses tamarack, a wood known for its tendency to split evenly. A market was found in China and other Pacific Rim nations, where millions of disposable chopsticks are used daily.

New markets for Alaskan timber may be opening soon. The People's Republic of China has had a volatile trade relationship with the U.S. over the last several years. China's demand for timber exceeds that of Japan's, and should increase if the government continues its program of westernization. South Korea is another potential importer of Alaskan timber. Supplying timber to South Korea is more dependent on the market than it is for either Japan or China. South Korea's small size and subordinate posture to the U.S. in terms of international trade relieve it of most pressures to import American products.

## Conclusion

The timber industry in Alaska, though important to the economy, is a very small player in the world market. Because of this, the industry has varying amounts of control over its future. Certain factors such as currency fluctuations and international trade agreements are outside the scope of the industry's influence. Issues such as the Tongass timber reform debate are important to many groups, many with desires vastly different from those of the industry.

One of the few areas where the industry has some control of its future is in supplying premium quality wood on the world market. Although Alaska is not the only area possessing this highly demanded commodity, the supplies are dwindling. The industry might find that additional value added processing could increase profits, increase employment, and prolong the industry's viability in an uncertain market.

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1/ The Jones Act requires that cargo shipped between American ports be carried on vessels built and registered in the United States. Most agree that this increases transportation costs. For more information, see the April 1983 issue of *Alaska Economic Trends*.

# A $20 Billion Economy-Alaska's Gross State Product

By Neal Fried

**Alaska's per capita GSP of $36,755 is the highest of all 50 states**

Every quarter economic analysts across the country pour over the nation's latest gross national product (GNP) figures. GNP is one of the most widely scrutinized economic indicators because it is one of the nation's broadest measures of economic health. Does an equivalent economic indicator exist for Alaska?

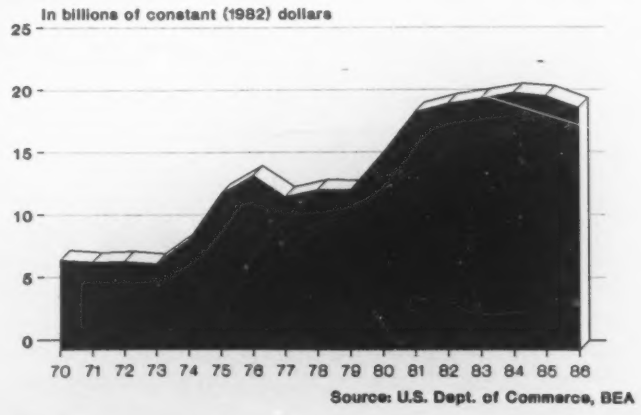
Gross state product (GSP) for Alaska is a measurement similar to the gross national product, though it is limited to the production which takes place within the state's borders. Gross state product figures provide a handy outline of the overall activity in the state's economy. It's a measure of the market value of all goods and services produced for final consumption for a given year. GSP doesn't command any space in the local media because it is not reported quarterly, or for that matter annually. Calculations of Alaska's GSP have been produced intermittently by the University of Alaska. More recently, the same people who calculate the nation's GNP-the U.S. Department of Commerce, Bureau of Economic Analysis, produced GSP figures for all of the states.

This gives us a rare opportunity to measure how productive Alaska is in comparison to other states. The difference between Alaska's product mix and the rest of the nation's can be explored. Because a historical series was also calculated, it is possible to track where Alaska's GSP has changed. The most recent data was produced for 1986 and historical data goes as far back as 1963.

### Almost a $20 Billion Dollar Economy

In 1986 Alaska produced $19.6 billion in goods and services. Alaska's GSP grew at a rate of 7.3% per year in the 1980s (1980-1986). However, much of this growth came as a result of price increases and not additional production. If Alaska's GSP is adjusted for price increases the rate falls to 3.5% per year-still a respectable growth rate compared to the national annual growth rate of 2.8%. Looking back to the decade of the 1970s the rate was even more impressive. In the 1970s Alaska's GSP forged ahead at an annual rate of 7.0%, double the rate of the 1980s. Oil development was largely responsible for these tremendous gains in the 1970s.

**Figure 1**
**Alaska GSP**
**1970-1986**




### GSP by Industry

Not surprisingly, the single largest slice of Alaska's GSP pie comes from oil. The oil and gas industry was responsible for 43% of the state's total product in 1986. Though direct employment in the oil and gas industry in Alaska represents less than four percent of the total employment, the GSP figures better illustrate how far reaching oil's influence is on the state's economy. Oil's slice of the pie has not

always been so large. In 1976 the oil industry's output represented only 15% of the state's GSP. But because of its above average growth its share grew dramatically.

Alaska's public sector, which employs almost one-third of the state's work force, produces only 13% of the GSP. Much of the means to operate state and local government comes from the state's share of Alaska's petroleum wealth. While state and local government's pace of growth has been about average, the federal side has been slow. In the 1980s the federal civilian annual growth rate actually lost ground, and the federal military side grew by less than one percent per year.

The secondary sectors (retail and wholesale trade, finance-insurance and real estate and services) experienced a decline in their share of the economy in the 1980s, largely because of substantial losses taken in 1986. Most of these industries did grow faster than the average during the 1980-1985 period. Retail trade grew particularly rapidly during this period of Alaska's economic history. Retail trade's employment followed suit, adding an additional 13,300 jobs during the 1980-1985 period. The strong growth of GSP in the secondary sector should resume when the economy begins to grow again.

**The secondary sectors experienced a decline in their share of the economy in the 1980s, largely because of substantial losses taken in 1986**

**Table 1**
**Alaska Gross State Product by Industry, 1970-1986**
**In Millions of Constant Dollars (1982 = 100)**

| | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|
| Total | $7,132 | $6,992 | $7,044 | $6,888 | $8,738 | $12,457 | $13,926 | $12,221 |
| Mining | 2,292 | 2,045 | 1,884 | 1,482 | 1,854 | 2,192 | 2,086 | 2,152 |
| Metal | 17 | 5 | 4 | 8 | 8 | 5 | 8 | 4 |
| Coal | 7 | 9 | 9 | 8 | 6 | 7 | 8 | 10 |
| Oil & Gas | 2,265 | 2,028 | 1,868 | 1,464 | 1,837 | 2,176 | 2,065 | 2,132 |
| Other Mining | 3 | 2 | 2 | 2 | 3 | 4 | 5 | 5 |
| Construction | 771 | 773 | 779 | 678 | 1,373 | 3,210 | 4,221 | 2,363 |
| Manufacturing | 258 | 259 | 257 | 315 | 354 | 376 | 466 | 524 |
| Lumber and Wood Products | 77 | 69 | 66 | 76 | 91 | 85 | 86 | 88 |
| Food and Kindred Products | 78 | 76 | 75 | 101 | 98 | 108 | 158 | 177 |
| Paper and Allied Products | 48 | 50 | 55 | 69 | 86 | 76 | 101 | 114 |
| Chemical and Allied Prod. | 6 | 7 | 8 | 10 | 11 | 12 | 18 | 27 |
| Petroleum and Coal Prod. | 12 | 18 | 11 | 13 | 13 | 17 | 24 | 37 |
| Other Manufacturing | 37 | 39 | 42 | 46 | 55 | 78 | 79 | 81 |
| Trans. Comm. & Utilities | 431 | 447 | 473 | 509 | 708 | 1,082 | 1,112 | 1,072 |
| Trucking & Warehousing | 67 | 59 | 63 | 64 | 118 | 304 | 270 | 201 |
| Water Transportation | 28 | 28 | 33 | 38 | 50 | 72 | 76 | 102 |
| Air Transportation | 143 | 128 | 138 | 150 | 210 | 234 | 246 | 250 |
| Pipelines | 5 | 1 | 3 | 24 | 56 | 47 | 27 | 208 |
| Communication | 86 | 114 | 119 | 121 | 144 | 209 | 237 | 266 |
| Utilities | 62 | 72 | 77 | 89 | 107 | 128 | 138 | 139 |
| Other Trans. Comm. & Util. | 40 | 45 | 40 | 23 | 23 | 88 | 118 | (94) |
| Trade | 521 | 547 | 584 | 607 | 694 | 963 | 1,047 | 1,075 |
| Wholesale | 167 | 168 | 178 | 174 | 210 | 322 | 353 | 339 |
| Retail | 354 | 379 | 406 | 433 | 484 | 641 | 694 | 736 |
| Finance-Ins. & R.E. | 517 | 534 | 653 | 763 | 993 | 1,289 | 1,329 | 1,363 |
| Services | 443 | 462 | 495 | 528 | 665 | 1,188 | 1,393 | 1,330 |
| Hotels | 51 | 51 | 54 | 55 | 71 | 96 | 109 | 109 |
| Business Services | 87 | 82 | 80 | 78 | 129 | 474 | 590 | 473 |
| Health Services | 78 | 91 | 105 | 116 | 131 | 154 | 190 | 215 |
| Social Ser. & Member. Org. | 54 | 56 | 55 | 49 | 51 | 107 | 123 | 128 |
| Other Services | 173 | 182 | 201 | 230 | 283 | 357 | 381 | 405 |
| Government | 1,797 | 1,846 | 1,838 | 1,899 | 1,991 | 2,066 | 2,115 | 2,194 |
| Federal Civilian | 578 | 544 | 495 | 513 | 529 | 559 | 546 | 573 |
| Federal Military | 705 | 685 | 648 | 648 | 650 | 627 | 597 | 598 |
| State & Local | 513 | 617 | 696 | 738 | 812 | 880 | 972 | 1,024 |
| Agricul., Forestry & Fisheries | 103 | 79 | 82 | 107 | 105 | 89 | 156 | 148 |

Source: U.S. Department of Commerce, Bureau of Economic Analysis
For Summary Data, See *Survey of Current Business*. May 1988. U.S.Department of Commerce, Bureau of Economic Analysis

Alaska's GSP fell almost five percent in 1986-making Alaska only one of five states in the nation to lose ground in 1986. All five of these losers were energy-producing states. Most of the nation made strong gains. The nation's GSP (an aggregate of the states and Washington DC's GSP) grew a robust 3.1% in 1986. GSP data will probably record losses in Alaska in 1987, but by 1988 some growth may be evident.

Figure 2 illustrates the pronounced difference between Alaska's product mix and the nation's. The mining industry dominates Alaska's GSP, but accounts for less than one percent of the nation's. On the other hand the manufacturing industry is the nation's dominant GSP generator, but in Alaska it accounts for only four percent. These differences will continue to prevail because 1) Alaska's mining industry will play an ever greater role in Alaska's economy as additional oil fields are developed and new hard rock mining sites are brought into production; 2) manufacturing's role could grow in Alaska's economy if a much larger share of the state's timber and fishing resources were processed in the state, but this does not appear likely in the near future. Even if this were to happen it still would not approach the nation's share of manufacturing. Other differences exist between Alaska's

**Table 1 (continued)**
**Alaska Gross State Product by Industry, 1970-1986**
**In Millions of Constant Dollars (1982 = 100)**

| 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | Annual Average Rate of Change 1980-1986 |
|---|---|---|---|---|---|---|---|---|---|
| $12,789 | $12,774 | $15,764 | $18,953 | $19,648 | $20,053 | $20,509 | $20,281 | $19,325 | 3.5% |
| 3,405 | 3,766 | 6,461 | 9,277 | 8,720 | 8,063 | 8,415 | 8,532 | 8,439 | 4.6 |
| 5 | 10 | 15 | 20 | 6 | 21 | 15 | 18 | 27 | 10.3 |
| 11 | 11 | 11 | 12 | 13 | 16 | 17 | 21 | 21 | 11.4 |
| 3,384 | 3,740 | 6,428 | 9,236 | 8,696 | 8,021 | 8,376 | 8,483 | 8,385 | 4.5 |
| 5 | 5 | 7 | 10 | 5 | 6 | 7 | 10 | 5 | -5.5 |
| 1,409 | 1,162 | 1,388 | 1,712 | 2,367 | 2,895 | 2,719 | 2,226 | 1,685 | 3.3 |
| 561 | 604 | 634 | 579 | 533 | 615 | 659 | 707 | 763 | 3.1 |
| 73 | 95 | 132 | 118 | 113 | 105 | 95 | 92 | 106 | -3.6 |
| 191 | 209 | 200 | 184 | 153 | 142 | 131 | 140 | 140 | -5.8 |
| 99 | 89 | 79 | 64 | 52 | 53 | 43 | 37 | 45 | -9.0 |
| 35 | 36 | 34 | 38 | 41 | 46 | 47 | 43 | 40 | 2.7 |
| 64 | 53 | 74 | 83 | 72 | 158 | 219 | 268 | 326 | 28.0 |
| 99 | 122 | 115 | 92 | 102 | 111 | 124 | 127 | 106 | -1.3 |
| 1,224 | 1,220 | 1,212 | 1,283 | 1,317 | 1,329 | 1,464 | 1,395 | 1,319 | 1.4 |
| 162 | 131 | 133 | 152 | 152 | 140 | 138 | 124 | 107 | -3.6 |
| 74 | 69 | 75 | 67 | 70 | 78 | 78 | 81 | 70 | -1.1 |
| 270 | 298 | 272 | 294 | 271 | 269 | 306 | 265 | 251 | -1.3 |
| 203 | 218 | 252 | 306 | 277 | 297 | 288 | 293 | – | – |
| 297 | 314 | 329 | 328 | 328 | 360 | 359 | 334 | 312 | -0.9 |
| 141 | 136 | 119 | 124 | 127 | 143 | 217 | 230 | 217 | 10.5 |
| 77 | 54 | 32 | 12 | 92 | 42 | 78 | 68 | – | – |
| 1,053 | 1,009 | 984 | 1,111 | 1,268 | 1,438 | 1,545 | 1,557 | 1,453 | 6.7 |
| 320 | 296 | 295 | 347 | 409 | 449 | 487 | 501 | 469 | 8.0 |
| 733 | 713 | 689 | 764 | 859 | 989 | 1,058 | 1,056 | 984 | 6.1 |
| 1,513 | 1,367 | 1,346 | 1,245 | 1,470 | 1,493 | 1,499 | 1,505 | 1,444 | 1.2 |
| 1,118 | 1,050 | 1,076 | 1,206 | 1,332 | 1,434 | 1,477 | 1,437 | 1,321 | 3.5 |
| 100 | 98 | 92 | 99 | 102 | 109 | 106 | 104 | 97 | 0.9 |
| 253 | 201 | 210 | 253 | 299 | 323 | 316 | 307 | 269 | 4.2 |
| 221 | 218 | 227 | 246 | 264 | 277 | 299 | 294 | 290 | 4.2 |
| 137 | 141 | 144 | 147 | 150 | 153 | 152 | 154 | 156 | 1.3 |
| 407 | 392 | 403 | 461 | 517 | 572 | 604 | 578 | 509 | 4.0 |
| 2,252 | 2,274 | 2,308 | 2,367 | 2,483 | 2,581 | 2,603 | 2,621 | 2,596 | 2.0 |
| 570 | 567 | 542 | 525 | 515 | 538 | 555 | 528 | 541 | -0.0 |
| 590 | 588 | 578 | 566 | 593 | 599 | 584 | 583 | 601 | 0.7 |
| 1,092 | 1,119 | 1,189 | 1,276 | 1,374 | 1,444 | 1,465 | 1,510 | 1,454 | 3.4 |
| 254 | 323 | 356 | 172 | 157 | 205 | 127 | 301 | 304 | -2.6 |

product mix and the nation's, but they are not quite as pronounced.

### A Small But Productive State

Though Alaska has the second smallest population in the nation, our GSP ranks 38th. Some states such as Hawaii and Maine have populations twice as large as Alaska's but smaller gross state products. If we look at per capita GSP (simply divide the GSP by the total population) Alaska's production is quite impressive. Alaska's per capita GSP of $36,755 is the highest of all 50 states. At least on a per capita basis, we are the most productive state in the nation. Our per capita GSP is more than double the national average and is 60% above the next runner- up, Wyoming. What this means is not altogether clear, but there is a strong correlation between income and state product. Generally speaking, those states with high per capita gross state product also enjoy higher per capita incomes. GSP-wise, Alaska is performing quite well. We can thank Prudhoe Bay for much of this distinction.

### GSP Does Not Tell The Whole Story

Like any other single economic indicator, GSP figures can't tell the whole story of Alaska's nor for that matter any economy. GSP does not account for subsistence, though subsistence is an economic output. It does not account for volunteer labor, and possibly its largest omission is that it does not account for labor that takes place in the household. Though all of these activities add to the productivity of a society, they are not accounted for because dollar values can't readily be assigned to these activities.

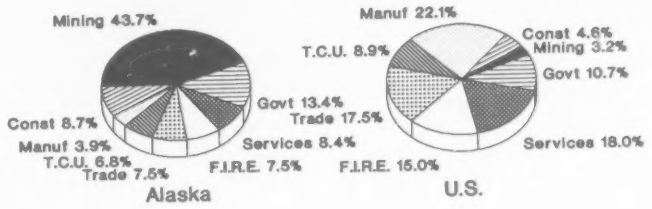
**Though Alaska has the second smallest population in the nation, our GSP ranks 38th**

**Table 2**
**Gross and Per Capita State Product by State in 1986 (current dollars)**

| | Gross State Product (millions) | Per Capita Gross State Product |
|---|---|---|
| **ALASKA** | $19,575 | $36,795 |
| Wyoming | 11,673 | 23,024 |
| Connecticut | 70,639 | 22,123 |
| New York | 362,736 | 20,384 |
| New Jersey | 154,765 | 20,297 |
| Nevada | 19,426 | 20,089 |
| Massachusetts | 115,526 | 19,802 |
| California | 533,816 | 19,770 |
| Delaware | 11,706 | 18,493 |
| Texas | 303,510 | 18,186 |
| Illinois | 209,666 | 18,151 |
| Hawaii | 19,320 | 18,141 |
| Colorado | 59,177 | 18,119 |
| New Hampshire | 18,518 | 18,031 |
| Virginia | 104,155 | 17,973 |
| Minnesota | 75,626 | 17,951 |
| Washington | 77,683 | 17,406 |
| U.S.A | 4,191,705 | 17,386 |
| Kansas | 42,472 | 17,272 |
| Maryland | 76,504 | 17,150 |
| Georgia | 102,922 | 16,872 |
| Michigan | 153,240 | 16,768 |
| Nebraska | 26,521 | 16,596 |
| Louisiana | 74,426 | 16,543 |
| Missouri | 83,534 | 16,496 |
| Ohio | 176,102 | 16,385 |
| Arizona | 53,253 | 16,241 |
| Wisconsin | 76,922 | 16,082 |
| Vermont | 8,636 | 15,963 |
| New Mexico | 23,603 | 15,959 |
| North Carolina | 100,961 | 15,947 |
| North Dakota | 10,733 | 15,807 |
| Rhode Island | 15,205 | 15,595 |
| Pennsylvania | 183,559 | 15,433 |
| Indiana | 84,922 | 15,432 |
| Iowa | 43,836 | 15,381 |
| Oregon | 41,278 | 15,277 |
| Florida | 177,729 | 15,198 |
| Tennessee | 72,328 | 15,068 |
| Oklahoma | 49,814 | 15,068 |
| Montana | 12,163 | 14,887 |
| Maine | 17,326 | 14,783 |
| Utah | 24,008 | 14,428 |
| Kentucky | 53,135 | 14,261 |
| South Dakota | 9,802 | 13,845 |
| Alabama | 55,007 | 13,582 |
| Arkansas | 31,638 | 13,344 |
| South Carolina | 44,727 | 13,229 |
| Idaho | 13,170 | 13,144 |
| West Virginia | 24,096 | 12,570 |
| Mississippi | 31,830 | 12,130 |

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

**Figure 2**
**Personal Income by Component**
**U.S. and Alaska**




Source: U.S. Dept. of Commerce, BEA

In spite of these shortcomings, GSP figures provide a broad sweep of Alaska's economy. They tell us the value of what Alaska produces. Gross state product gives a better feel for the petroleum industry's role and other industries in Alaska's economy. Combined with other economic indicators, these gross state product figures help to complete the process of painting a comprehensive picture of the state's economy.

# Alaska's Employment Scene-Have We Hit Bottom Yet?

By Neal Fried

**Statewide employment is less than one percent or 1,325 jobs below 1987, a far cry from the 10,400 jobs lost (4.7%) in the state last year**

Have we hit the bottom of the recession yet? This is a question many people are asking today. Does the question have merit? It certainly does. The mere fact that it is being asked attests to a renewed optimism in Alaska.

Statewide employment numbers for 1988 remain below 1987 levels, but the difference is small. Statewide employment is less than one percent or 1,325 jobs below 1987, a far cry from the 10,400 jobs lost (4.7%) in the state last year. Figure 1 illustrates how job losses have narrowed considerably during the course of 1988.

In terms of jobs, the Alaskan labor market has made greater strides towards recovery than the economy has. Reports of labor shortages are increasing, a phenomenon unheard of during the last two years. August's unemployment rate of 7.6% is a partial testimony to this. Fewer lower 48 job seekers, an exodus of the unemployed, and an end to the hemorrhaging of the economy have allowed the job market to recover.

### A Mixed Industry Picture

A mixed industry picture is emerging. Some industries are moving full speed ahead, others are recovering slowly, some are lingering in balance, and a few remain in serious condition (Figure 2). The expression "a swiss cheese economy" is a good description of Alaska's economy today-some industries are prosperous, others are healthy and yet others are still falling through the holes.

## The Strong Side of the Economy

The industries which can be counted among the prosperous are fishing, timber and mining-all basic resource industries. All have had employment growth rates of over five percent for the first eight months of 1988, and timber and fish processing employment growth has exceeded ten percent. Strong worldwide demand and a weak dollar have caused what some are now calling the beginning of a scramble for many of Alaska's natural resources.

Though the salmon catch was somewhat disappointing, prices hit new records. The value of the salmon catch this year is estimated to be worth $581 million, more than $100 million above last year's value, despite a slightly smaller catch. The strong yen and the Japanese appetite for salmon caused prices to set new records. Bottomfishing helped to keep the fish processing employment numbers high. Some bad news on the bottomfishing front is that over-fishing appears to be taking its toll in Kodiak's waters. More research will have to be done to confirm this development.

The strong yen and new regulations in British Columbia which have curtailed some of their logging activities is boosting the demand for Alaskan logs. Alaska timber producers are operating at nearly full capacity. A new mill is being built in Ketchikan, but a more interesting development is the number of new timber ventures that are emerging outside of southeast Alaska, which has dominated the industry in Alaska up to the present. For the first time in a decade, timber is being harvested in southcentral and interior forests for export to Asia. The scale is small, and the exports are rough timber, but it is a new development many people thought would never occur. In addition, Chugach Alaska Corporation is building a high-tech timber mill in Seward. Unlike most of the other new ventures, it will process finished wood products for export and local markets. The mill will initially employ 50, but they hope to double their work force by 1990. A number of other plans are also being made for timber development in southcentral Alaska.

Hard rock mining activity has reawakened. Non-oil related mining employment in August was 20% above year ago levels. High mineral prices have also led to a boom in exploration activity in the state. The Alaska Department of Commerce estimates that exploration activity has doubled or tripled this year. The employment numbers are small (1,076 in August), but they could be sowing seeds for additional activity in the future. The mining employment figures will receive a big boost when the Greens Creek and Red Dog mines begin production in 1989 and 1990 respectively.

On the other side of the mining equation, activity in the oil industry does not match its hard rock counterpart, but still it could be counted among the recovering industries. Oil industry employment is up almost five percent, in spite of lower oil prices.

**Non-oil related mining employment in August was 20% above year ago levels**

Table 1
Nonagricultural Wage and Salary Employment
By Place of Work
Alaska

| | p/ 8/88 | r/ 7/88 | 8/87 | Changes From: 7/88 | 8/87 |
|---|---|---|---|---|---|
| Nonag. Wage & Salary | 223,100 | 223,600 | 224,400 | -500 | -1,300 |
| Mining | 9,300 | 9,300 | 8,800 | 0 | 500 |
| Construction | 11,200 | 11,000 | 13,300 | 200 | -2,100 |
| Manufacturing | 20,900 | 22,900 | 20,500 | -2,000 | 400 |
| Seafood Processing | 13,900 | 16,000 | 13,800 | -2,100 | 100 |
| Lumber & Paper Prod. | 3,700 | 3,600 | 3,300 | 100 | 400 |
| All Other Manufacturing | 3,300 | 3,300 | 3,400 | 0 | -100 |
| Transportation | 18,800 | 19,000 | 19,300 | -200 | -500 |
| Trucking & Warehousing | 2,600 | 2,600 | 2,600 | 0 | 0 |
| Water Transportation | 1,100 | 1,200 | 1,200 | -100 | -100 |
| Air Transportation | 5,900 | 5,900 | 5,800 | 0 | 100 |
| All Other Transportation | 9,200 | 9,300 | 9,700 | -100 | -500 |
| Trade | 44,100 | 43,700 | 44,600 | 400 | -500 |
| Wholesale | 7,500 | 7,600 | 7,600 | -100 | -100 |
| Retail | 36,600 | 36,100 | 37,000 | 500 | -400 |
| Gen.Mer.& Apparel | 5,400 | 5,200 | 5,300 | 200 | 100 |
| Food Stores | 6,200 | 6,200 | 6,100 | 0 | 100 |
| Eating & Drinking Pl. | 13,700 | 13,400 | 14,300 | 300 | -600 |
| All Other Retail | 11,300 | 11,300 | 11,300 | 0 | 0 |
| Finance-Ins. & R.E. | 10,900 | 10,900 | 11,100 | 0 | -200 |
| Services | 44,100 | 44,000 | 43,700 | 100 | 400 |
| Government | 63,800 | 62,800 | 63,100 | 1,000 | 700 |
| Federal | 18,300 | 18,300 | 18,600 | 0 | -300 |
| State | 19,200 | 18,400 | 18,200 | 800 | 1,000 |
| Local | 26,300 | 26,100 | 26,300 | 200 | 0 |

Prepared in cooperation with the U.S. Bureau of Labor Statistics. Government includes teachers in primary and secondary schools, and personnel employed by the University of Alaska.

Benchmark Date March 1987.

p/ Denotes Preliminary Estimates.
r/ Denotes Revised Estimates.

Table 2

# Nonagricultural Wage and Salary Employment By Place of Work

## Anchorage

| | p/ 8/88 | r/ 7/88 | 8/87 | Changes From: 7/88 | Changes From: 8/87 |
|---|---|---|---|---|---|
| Nonag. Wage & Salary | 102,150 | 102,100 | 103,550 | 50 | -1,400 |
| Mining | 3,550 | 3,600 | 3,200 | -50 | 350 |
| Construction | 5,600 | 5,500 | 6,950 | 100 | -1,350 |
| Manufacturing | 2,950 | 3,000 | 2,800 | -50 | 150 |
| Transportation | 9,650 | 9,700 | 9,950 | -50 | -300 |
| Trucking & Warehousing | 1,600 | 1,550 | 1,700 | 50 | -100 |
| Water Transportation | 300 | 350 | 300 | -50 | 0 |
| Air Transportation | 3,300 | 3,350 | 3,400 | -50 | -100 |
| All Other Transportation | 4,450 | 4,450 | 4,550 | 0 | -100 |
| Trade | 24,100 | 23,900 | 24,050 | 200 | 50 |
| Wholesale | 5,650 | 5,700 | 5,450 | -50 | 200 |
| Retail | 18,450 | 18,200 | 18,600 | 250 | -150 |
| Gen.Merch. & Apparel | 2,600 | 2,550 | 2,500 | 50 | 100 |
| Food Stores | 2,900 | 2,850 | 2,800 | 50 | 100 |
| Eating & Drinking Pl. | 7,150 | 7,000 | 7,550 | 150 | -400 |
| All Other Retail | 5,800 | 5,800 | 5,750 | 0 | 50 |
| Finance-Ins. & R.E. | 7,150 | 7,100 | 7,350 | 50 | -200 |
| Services | 24,250 | 24,400 | 24,000 | -150 | 250 |
| Government | 24,900 | 24,900 | 25,250 | 0 | -350 |
| Federal | 10,450 | 10,550 | 10,700 | -100 | -250 |
| State | 6,450 | 6,200 | 6,350 | 250 | 100 |
| Local | 8,000 | 8,150 | 8,200 | -150 | -200 |

## Fairbanks

| | p/ 8/88 | r/ 7/88 | 8/87 | Changes From: 7/88 | Changes From: 8/87 |
|---|---|---|---|---|---|
| Nonag. Wage & Salary | 26,850 | 26,550 | 26,750 | 300 | 100 |
| Mining | 100 | 100 | 150 | 0 | -50 |
| Construction | 2,000 | 1,850 | 2,100 | 150 | -100 |
| Manufacturing | 550 | 550 | 600 | 0 | -50 |
| Transportation | 2,350 | 2,350 | 2,350 | 0 | 0 |
| Trucking & Warehousing | 400 | 400 | 350 | 0 | 50 |
| Air Transportation | 400 | 400 | 300 | 0 | 100 |
| All Other Transportation | 1,550 | 1,550 | 1,700 | 0 | -150 |
| Trade | 6,100 | 6,250 | 5,800 | -150 | 300 |
| Wholesale | 700 | 750 | 700 | -50 | 0 |
| Retail | 5,400 | 5,500 | 5,100 | -100 | 300 |
| Food Stores | 800 | 850 | 850 | -50 | -50 |
| All Other Retail | 4,600 | 4,650 | 4,250 | -50 | 350 |
| Finance-Ins. & R.E. | 850 | 850 | 950 | 0 | -100 |
| Services | 6,000 | 5,900 | 5,950 | 100 | 50 |
| Government | 8,900 | 8,700 | 8,850 | 200 | 50 |
| Federal | 2,950 | 2,950 | 2,950 | 0 | 0 |
| State | 3,600 | 3,450 | 3,550 | 150 | 50 |
| Local | 2,350 | 2,300 | 2,350 | 50 | 0 |

## Anchorage-MatSu

| | p/ 8/88 | r/ 7/88 | 8/87 | Changes From: 7/88 | Changes From: 8/87 |
|---|---|---|---|---|---|
| Nonag. Wage & Salary | 108,950 | 108,700 | 110,100 | 250 | -1,150 |
| Mining | 3,600 | 3,600 | 3,200 | 0 | 400 |
| Construction | 5,950 | 5,800 | 7,300 | 150 | -1,350 |
| Manufacturing | 3,100 | 3,150 | 2,900 | -50 | 200 |
| Transportation | 10,350 | 10,400 | 10,600 | -50 | -250 |
| Trade | 26,100 | 25,800 | 25,800 | 300 | 300 |
| Finance-Ins. & R.E. | 7,600 | 7,550 | 7,800 | 50 | -200 |
| Services | 25,500 | 25,600 | 25,150 | -100 | 350 |
| Government | 26,750 | 26,800 | 27,350 | -50 | -600 |

## Interior

| | p/ 8/88 | r/ 7/88 | 8/87 | Changes From: 7/88 | Changes From: 8/87 |
|---|---|---|---|---|---|
| Nonag. Wage & Salary | 30,950 | 30,400 | 31,050 | 550 | -100 |
| Mining | 300 | 300 | 300 | 0 | 0 |
| Construction | 2,200 | 2,050 | 2,400 | 150 | -200 |
| Manufacturing | 600 | 600 | 600 | 0 | 0 |
| Transportation | 2,650 | 2,650 | 2,750 | 0 | -100 |
| Trade | 6,650 | 6,650 | 6,350 | 0 | 300 |
| Finance-Ins. & R.E. | 900 | 900 | 1,050 | 0 | -150 |
| Services | 6,600 | 6,500 | 6,650 | 100 | -50 |
| Government | 11,050 | 10,750 | 10,950 | 300 | 100 |

## Gulf Coast

| | p/ 8/88 | r/ 7/88 | 8/87 | Changes From: 7/88 | Changes From: 8/87 |
|---|---|---|---|---|---|
| Nonag. Wage & Salary | 23,850 | 24,000 | 23,800 | -150 | 50 |
| Mining | 800 | 750 | 900 | 50 | -100 |
| Construction | 1,100 | 1,050 | 1,300 | 50 | -200 |
| Manufacturing | 7,000 | 7,550 | 7,000 | -550 | 0 |
| Seafood Processing | 6,400 | 6,950 | 6,400 | -550 | 0 |
| All Other Manufacturing | 600 | 600 | 600 | 0 | 0 |
| Transportation | 1,400 | 1,400 | 1,350 | 0 | 50 |
| Trade | 4,100 | 4,150 | 3,950 | -50 | 150 |
| Wholesale | 550 | 600 | 600 | -50 | -50 |
| Retail | 3,550 | 3,550 | 3,350 | 0 | 200 |
| Finance-Ins. & R.E. | 600 | 550 | 600 | 50 | 0 |
| Services | 3,550 | 3,550 | 3,650 | 0 | -100 |
| Government | 5,300 | 5,000 | 5,050 | 300 | 250 |
| Federal | 550 | 500 | 600 | 50 | -50 |
| State | 1,650 | 1,550 | 1,500 | 100 | 150 |
| Local | 3,100 | 2,950 | 2,950 | 150 | 150 |

## Southeast Alaska

| | p/ 8/88 | r/ 7/88 | 8/87 | Changes From: 7/88 | Changes From: 8/87 |
|---|---|---|---|---|---|
| Nonag. Wage & Salary | 32,350 | 31,600 | 31,350 | 750 | 1,000 |
| Construction | 1,150 | 1,100 | 1,300 | 50 | -150 |
| Manufacturing | 6,200 | 5,700 | 5,500 | 500 | 700 |
| Seafood Processing | 2,400 | 2,000 | 2,100 | 400 | 300 |
| Lumber & Paper Prod. | 3,550 | 3,450 | 3,200 | 100 | 350 |
| All Other Manufacturing | 250 | 250 | 200 | 0 | 50 |
| Transportation | 2,500 | 2,450 | 2,450 | 50 | 50 |
| Trade | 4,950 | 4,950 | 5,100 | 0 | -150 |
| Wholesale | 450 | 450 | 450 | 0 | 0 |
| Retail | 4,500 | 4,500 | 4,650 | 0 | -150 |
| Finance-Ins. R.E. | 1,150 | 1,150 | 1,100 | 0 | 50 |
| Services | 4,950 | 4,950 | 5,000 | 0 | -50 |
| Government | 11,250 | 11,100 | 10,800 | 150 | 450 |
| Federal | 2,000 | 2,000 | 2,050 | 0 | -50 |
| State | 5,200 | 5,150 | 4,900 | 50 | 300 |
| Local | 4,050 | 3,950 | 3,850 | 100 | 200 |

Production is up along with drilling activity. September's Hughes oil rig count for Alaska was up by four over last year. Job wise this translates into approximately 200 direct jobs in the industry.

The lion's share of the state's secondary economy (trade and services) is presently lingering in balance. The retail trade employment level for the first eight months of the year is even with 1987 levels-a vast improvement over the two and seven percent losses endured in 1986 and 1987. The service industry's eight month employment track record is down (-1.8%) but in recent months employment has surged above year-ago levels. Renewed confidence in the economy and some improvement in personal income have breathed some new life into this sector.

The government picture is mixed. Federal government employment remains virtually unchanged. State government for the first eight months of the year is almost two percent above year ago levels. Local government remains the low spot in government. It is still losing ground, though these losses are concentrated in Fairbanks and Anchorage. Most other communities are finding it possible to maintain their government employment levels.

Early accounts of this year's tourism season have been good. A record number of cruise ships docked in most Alaskan ports this year. Cheap gasoline insured strong Alaska Highway tourist traffic. The number of visitors to Denali National Park and most national parks will hit new records when the end of the year counts are made. Not all tourist operators experienced increases, but much of that may be because competition is growing. New entry into tourism industry is strong, and in some cases it is growing faster than the market is. An increasing share of the tourism market is going to the independent traveller, which means those businesses catering to this segment of the market have greater potential for growth.

### The Economy's Weak Side

Meanwhile, Alaska's construction industry remains in rough shape. The value of construction awards in the state are off by 16% from 1987, which was a poor year itself in Alaska's construction industry. August's

**Construction losses remain the single largest drag on the economy. If construction were not sustaining these large losses, the overall economy would be registering growth in 1988**

Table 3
Alaska Hours and Earnings for Selected Industries [1/2]

| | Average Weekly Earnings | | | Average Weekly Hours | | | Average Hourly Earnings | | |
|---|---|---|---|---|---|---|---|---|---|
| | P/ 8/88 | R/ 7/88 | 8/87 | P/ 8/88 | R/ 7/88 | 8/87 | P/ 8/88 | R/ 7/88 | 8/87 |
| Mining | $1,160.32 | $1,191.71 | $1,060.34 | 49.0 | 49.8 | 47.4 | $23.68 | $23.93 | $22.37 |
| Construction | 1,071.79 | 1,046.86 | 1,093.11 | 43.2 | 42.4 | 43.9 | 24.81 | 24.69 | 24.90 |
| Manufacturing | 511.99 | 465.98 | 524.39 | 46.8 | 46.0 | 48.6 | 10.94 | 10.13 | 10.79 |
| Seafood Processing | 409.95 | 392.85 | 435.86 | 48.4 | 48.5 | 50.8 | 8.47 | 8.10 | 8.58 |
| Lumber & Paper Prod | 697.92 | 587.12 | 716.45 | 44.2 | 38.1 | 44.5 | 15.79 | 15.41 | 16.10 |
| Trans., Comm. & Util. | 565.61 | 604.63 | 575.24 | 34.7 | 37.3 | 36.5 | 16.30 | 16.21 | 15.76 |
| Trade | 369.69 | 389.05 | 371.13 | 33.7 | 35.4 | 34.3 | 10.97 | 10.99 | 10.82 |
| Wholesale | 520.23 | 568.26 | 525.10 | 37.4 | 41.0 | 39.6 | 13.91 | 13.86 | 13.26 |
| Retail | 321.10 | 330.96 | 320.13 | 32.5 | 33.6 | 32.5 | 9.88 | 9.85 | 9.85 |
| Finance-Ins. & R.E | 394.88 | 414.38 | 391.40 | 33.1 | 35.6 | 33.8 | 11.93 | 11.64 | 11.58 |

BENCHMARK MARCH 1987

[1] Prepared in cooperation with the Bureau of Labor Statistics US Department of Labor.

[2] Excludes eating and drinking establishments.

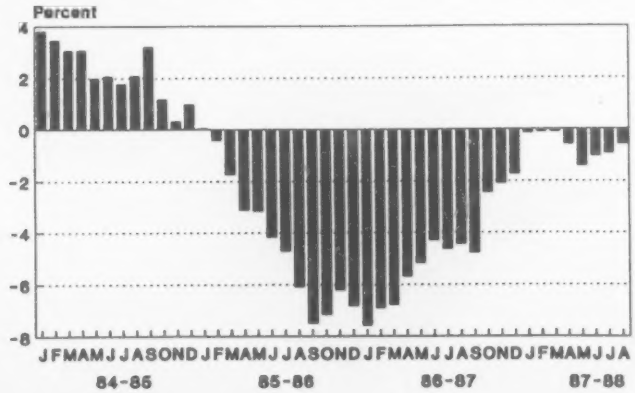
AVERAGE HOURS AND EARNINGS SERIES: Averages are based on data for full and part time production workers (manufacturing) and nonsupervisory workers (nonmanufacturing) and are for gross earnings and hours paid, including overtime pay and hours.

Alaska's construction industry. August's employment level of 11,220 represents less than half the peak August 1983 employment of 26,300. We have to reach back to the year 1973 to find an equivalent August level of employment activity in Alaska's construction industry. We only have to return to 1982-83 to find a similar measure of activity for the entire economy. Construction losses remain the single largest drag on the economy. If construction were not sustaining these large losses, the overall economy would be registering growth in 1988.

**Preliminary estimates for August indicate that Fairbanks' employment has turned the corner after more than two and a half years of losses**

The state's finance-insurance and real estate industry is not in much better shape than construction. The latest casualty in the financial sector was Alaska Continental Bank, which was shut down by state banking authorities in August. It reopened as First Interstate Bank based out of Los Angeles. This brings the number of financial institutions which have closed their doors to seven. A number of other financial institutions remain in tough shape, some of which may join the list of failures. The real estate sector also remains on the critical list. Recent reports have been trickling in that new activity is occurring in real estate. Much of it appears to be upgrading activity. Institutional investors are also beginning to eye real estate with interest, which could be a good sign.

**Figure 1**
**Alaska Employment**
**Over-the-Year Change by Month**




## Geographic Differences Prevail

Not only is the industry picture mixed, but so is the geographic picture. From a statewide perspective, Anchorage remains one of the biggest blemishes on the state's economy. Though the largest city's picture has improved markedly over the last year (a 2.5% decline versus an 8.0% decline in 1987) its continued job losses has prevented the statewide economy from moving into the black. The surplus of real estate has kept the local construction industry extremely depressed, and it continues to strain the city's financial sector. Anchorage is not benefiting from the improved outlook in the state's fishing, timber and hard rock mining industries to the degree that other parts of the state are.

This is not to say that there are no bright spots. The state's oil industry, headquartered in Anchorage, is looking up. Retail trade is beginning to show signs of new life. State government employment has moved into the positive side of the ledger, and all other industries have improved their performance relatively speaking. In the new development category, Federal Express recently broke ground for a package handling facility which will eventually employ 150-200 people. In spite of Anchorage's lingering problems, whispers of optimism and bottoming out are now being heard in various business and government circles.

Preliminary estimates for August indicate that Fairbanks' employment has turned the corner after more than two and a half years of losses (Figure 3). These estimates are based on only one month's data, and the over-the-year gain is small, but it is a strong indication that the Borough's economy is hitting bottom. Fairbanks' construction industry's losses became small enough in August that healthier industries were able to close the gap in the employment picture. A major factor in this narrowing of construction's losses has been military related construction activity on Fort

Wainwright. Presently approximately $98 million worth of projects are underway. Construction is not yet out of the woods, but it is cutting its losses. It will be critical to watch Fairbanks closely in the upcoming months to see if this positive trend persists.

Southeast Alaska's August unemployment rate of 5.6% was the lowest in the state and was nearly identical to the nation's rate of 5.4%. The region is the major beneficiary of the timber boom. Though the volume of fish caught was disappointing, prices were strong. A strong tourist season is being reported this year. Growth in state government has been another big plus for the region.

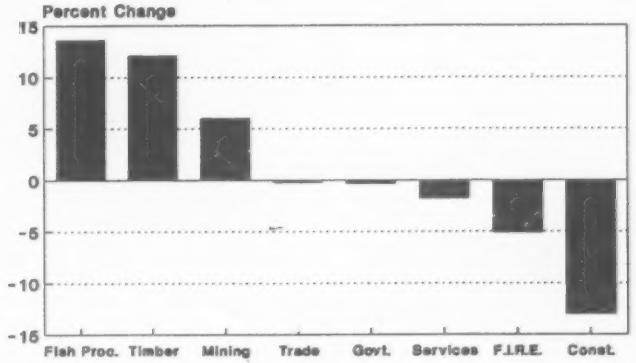
Gulf Coast's economic picture is good, but it is not without its detractions. The region's salmon season was excellent, both volume and price wise. Seward and Homer are looking good. The healthy fishing season helped both cities, and the new prison in Seward and the construction of Bradley Lake near Homer are additional pluses. New developments, such as the timber mill in Seward and the homeporting of Oceantrawl's bottomfish operations in Homer keep the economic outlook for these cities promising. Kodiak remains prosperous with its unemployment rate in August at 3.0%. The economy in the Kenai-Soldotna area remains mixed. They are struggling with many of the same problems that Anchorage is, but the picture is slowly improving. Valdez appears to be holding its own.

## Conclusion

The upshot is that the state's economy is not out of the woods yet, but it certainly is making an effort. Certain industries and areas that were either never affected by the recession of 1986 or have already closed the gap are now moving ahead full bore. Some are just getting by and others are straggling. None of the state's regions have yet been able to climb back to where they were during the roaring mid-1980s.

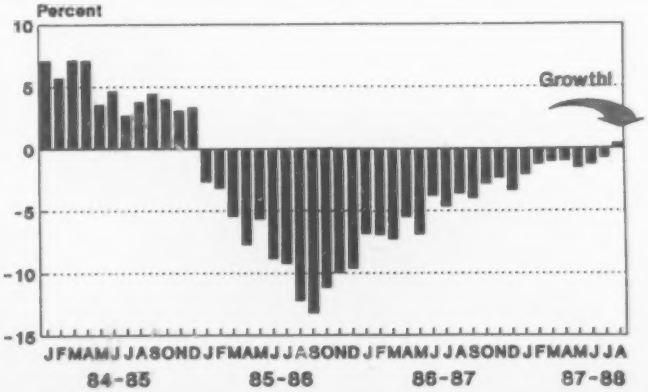
An individual's perspective of when the turn around in the economy arrives is often quite different from the statistical turnaround point. For some individuals the turning point will not come until the economy climbs back to where it was in 1985. For other individuals or businesses the economy has already bottomed out because they found a job, or their sales are beginning to climb again, or they were able to meet the last payroll. Simply said, the bottom or turn around will come at different times for different industries, individuals, and areas of the state.

**Figure 2**
**Industry winners and Losers**
**Alaska Employment by Industry 1987-1988***




*Based on Jan-Aug averages

**Figure 3**
**Fairbanks Employment**
**Over-the-Year Change by Month**



## Table 4
## Labor Force By Region and Census Area

| | Labor Force | | | Unemployment | | | Rate | | | Employment | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P/ 8/88 | R/ 7/88 | 8/87 | P/ 8/88 | R/ 7/88 | 8/87 | P/ 8/88 | R/ 7/88 | 8/87 | P/ 8/88 | R/ 7/88 | 8/87 |
| Alaska Statewide | 251,072 | 254,183 | 265,608 | 19,077 | 19,392 | 23,596 | 7.6 | 7.6 | 8.9 | 231,995 | 234,791 | 242,012 |
| Anch.-MatSu Region | 127,690 | 129,167 | 135,396 | 9,467 | 9,507 | 11,479 | 7.4 | 7.4 | 8.5 | 118,223 | 119,660 | 123,917 |
| Anchorage Borough | 112,343 | 113,913 | 119,787 | 7,376 | 7,173 | 8,921 | 6.6 | 6.3 | 7.4 | 104,967 | 106,740 | 110,866 |
| MatSu Borough | 15,347 | 15,254 | 15,609 | 2,091 | 2,334 | 2,558 | 13.6 | 15.3 | 16.4 | 13,256 | 12,920 | 13,051 |
| Gulf Coast Region | 30,612 | 31,223 | 32,622 | 2,440 | 2,262 | 2,955 | 8.0 | 7.2 | 9.1 | 28,172 | 28,961 | 29,667 |
| Kenai Peninsula Bor | 19,564 | 19,878 | 20,904 | 1,969 | 1,790 | 2,375 | 10.1 | 9.0 | 11.4 | 17,595 | 18,088 | 18,529 |
| Kodiak Island Bor | 6,688 | 6,878 | 7,109 | 202 | 210 | 278 | 3.0 | 3.1 | 3.9 | 6,486 | 6,668 | 6,831 |
| Valdez-Cordova | 4,360 | 4,467 | 4,609 | 269 | 262 | 302 | 6.2 | 5.9 | 6.6 | 4,091 | 4,205 | 4,307 |
| Interior Region | 36,769 | 36,981 | 39,502 | 3,585 | 3,785 | 4,753 | 9.8 | 10.2 | 12.0 | 33,184 | 33,196 | 34,749 |
| Fairbanks North Star Bor | 31,724 | 31,890 | 33,990 | 3,053 | 3,208 | 3,967 | 9.6 | 10.1 | 11.7 | 28,671 | 28,682 | 30,023 |
| Southeast Fairbanks | 2,152 | 2,151 | 2,322 | 216 | 215 | 295 | 10.0 | 10.0 | 12.7 | 1,936 | 1,936 | 2,027 |
| Yukon-Koyukuk | 2,893 | 2,940 | 3,190 | 316 | 362 | 491 | 10.9 | 12.3 | 15.4 | 2,577 | 2,578 | 2,699 |
| Northern Region | 7,971 | 8,169 | 8,368 | 810 | 908 | 927 | 10.2 | 11.1 | 11.1 | 7,161 | 7,261 | 7,441 |
| Nome | 3,101 | 3,149 | 3,245 | 376 | 386 | 414 | 12.1 | 12.3 | 12.8 | 2,725 | 2,763 | 2,831 |
| North Slope Borough | 2,787 | 2,859 | 2,903 | 151 | 186 | 164 | 5.4 | 6.5 | 5.6 | 2,636 | 2,673 | 2,739 |
| Northwest Arctic Bor | 2,083 | 2,161 | 2,220 | 283 | 336 | 349 | 13.6 | 15.5 | 15.7 | 1,800 | 1,825 | 1,871 |
| Southeast Region | 35,523 | 35,128 | 36,598 | 1,989 | 1,901 | 2,555 | 5.6 | 5.4 | 7.0 | 33,534 | 33,227 | 34,043 |
| Haines Borough | 907 | 888 | 940 | 61 | 50 | 81 | 6.7 | 5.6 | 8.6 | 846 | 838 | 859 |
| Juneau Borough | 15,791 | 15,566 | 16,244 | 838 | 752 | 1,066 | 5.3 | 4.8 | 6.6 | 14,953 | 14,814 | 15,178 |
| Ketchikan Gateway Bor | 6,979 | 6,941 | 7,213 | 353 | 375 | 486 | 5.1 | 5.4 | 6.7 | 6,626 | 6,566 | 6,727 |
| Pr. of Wales-Outer Ktch | 2,628 | 2,611 | 2,702 | 225 | 230 | 262 | 8.6 | 8.8 | 9.7 | 2,403 | 2,381 | 2,440 |
| Sitka Borough | 4,231 | 4,197 | 4,347 | 210 | 212 | 265 | 5.0 | 5.1 | 6.1 | 4,021 | 3,985 | 4,082 |
| Skagway-Yakutat-Ang | 1,625 | 1,619 | 1,681 | 141 | 148 | 174 | 8.7 | 9.1 | 10.4 | 1,484 | 1,471 | 1,507 |
| Wrangell-Petersburg | 3,362 | 3,306 | 3,471 | 161 | 134 | 221 | 4.8 | 4.1 | 6.4 | 3,201 | 3,172 | 3,250 |
| Southwest Region | 12,507 | 13,515 | 13,122 | 786 | 1,029 | 927 | 6.3 | 7.6 | 7.1 | 11,721 | 12,486 | 12,195 |
| Aleutian Islands | 3,473 | 3,731 | 3,606 | 98 | 135 | 94 | 2.8 | 3.6 | 2.6 | 3,375 | 3,596 | 3,512 |
| Bethel | 4,888 | 5,292 | 5,193 | 391 | 502 | 514 | 8.0 | 9.5 | 9.9 | 4,497 | 4,790 | 4,679 |
| Bristol Bay Borough | 435 | 467 | 443 | 28 | 33 | 20 | 6.4 | 7.1 | 4.5 | 407 | 434 | 423 |
| Dillingham | 2,182 | 2,328 | 2,276 | 88 | 97 | 97 | 4.0 | 4.2 | 4.3 | 2,094 | 2,231 | 2,179 |
| Wade Hampton | 1,529 | 1,697 | 1,604 | 181 | 262 | 202 | 11.8 | 15.4 | 12.6 | 1,348 | 1,435 | 1,402 |

P/= Preliminary R/= Revised 1987 Benchmark

Federal guidelines require the use of unrounded labor force data, adjusted to be consistent with the Current Population Survey (CPS) in formulas used to allocate federal funds. Comparisons between different time periods are not as meaningful as other time series published by the Alaska Department of Labor; because Alaska's CPS sample size is inadequate to accurately indicate monthly changes in level. The sampling errors are random in nature; meaning that the unemployment rates, in any given month, are as likely to be high as frequently as they are low. The official definitions of unemployment, currently in place, exclude anyone who has made no attempt to find work in the four week period up to and including the week that includes the twelfth of each month. Most economists feel that Alaska's rural localities have proportionately more of these discouraged workers.

**ALASKA ECONOMIC TRENDS**
ALASKA DEPARTMENT OF LABOR
EMPLOYMENT SECURITY DIVISION
PO BOX 3-7000
JUNEAU, ALASKA 99802

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